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PRELIMINARY

LITTLE JOE II LAUNCH VEHICLE

INTERFACE SPECIFICATION

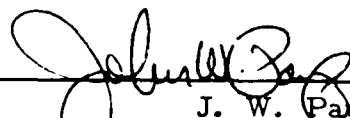
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30 September 1962

NAS 9-150

Approved by


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Vice President and Apollo Program Manager

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PRELIMINARY LITTLE JOE II INTERFACE SPECIFICATION

1. SCOPE

1.1 Scope. - This specification delineates the interface requirements between the Apollo command module adapter and the Little Joe II launch vehicle. Figure 1 reflects the Little Joe II vehicle configuration. This specification is applicable to the maximum "q" and high altitude abort missions only. (Boilerplate numbers 12, 21, 22 and 23)

2. APPLICABLE DOCUMENTS

2.1 Applicability. - The following documents of the issue in effect on the date of contract form a part of this specification to the extent specified herein.

SPECIFICATIONS

North American Aviation, Inc.
Space and Information Systems Division

SID 62-700-2	Preliminary Apollo Spacecraft Requirements Specification
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DRAWINGS

North American Aviation, Inc.
Space and Information Systems Division

ICDO7-00001	Little Joe II to Adapter -G/D Convair NAA-NASA
ICDO7-00002	Little Joe II Vehicle Configuration to Launcher and Gantry - G/D Convair GSE Facilities

2.2 Precedence. - The order of precedence in case of conflict shall be as follows:

- (a) The contract
- (b) This specification

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(c) Other documents referenced herein.

3. REQUIREMENTS

3.1 General. - The physical interface between the Apollo command module adapter and the Little Joe II launch vehicle is located near station 255.1 of Figure 1. The electrical interface is reflected in paragraph 3.1.2.

3.1.1 Physical Compatibility. - The lower mating surface of the adapter shall be physically compatible with the mating surface of the Little Joe II launch vehicle as reflected in North American Aviation Drawing ICDO7-00001.

3.1.2 Electrical Compatibility. - The electrical interstage cabling from the command module, through the adapter, to the launch vehicle shall be compatible with launch vehicle cabling and connectors. No other launch vehicle electrical interface exists.

3.2 Hardware Responsibilities (NAA). - The contractor's hardware responsibilities for the Apollo command module adapter and the Little Joe II launch vehicle interface shall be as follows:

- (a) Adapter.
- (b) Attaching hardware part number MS 200005.
- (c) One (1) launch umbilical through the adapter to the launch vehicle interface.
- (d) Hardware assembly responsibility.
- (e) One (1) umbilical between the command module and the launch tower.
- (f) Installation of item (e) above.
- (g) Payload umbilical junction box installed at base of launch tower.
- (h) Master tooling for attach bolt hole pattern.

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3.2.1 Hardware Responsibilities (Non-NAA). - Non-NAA hardware requirements for the Apollo command module adapter and the Little Joe II launch vehicle interface shall be as follows: :

- (a) Little Joe II launch vehicle.
- (b) Nut plates for attaching hardware, Kaynar part number F 2400-5 or equivalent.
- (c) Hardware assembly assistance.
- (d) Umbilical support and retraction mechanism for item (e) of contractor's hardware responsibilities. (Paragraph 3.2).
- (e) Installation of connectors and wiring to NAA-furnished junction box (Paragraph 3.2 item g).

3.3 Environment. - The environmental requirements for the Apollo command module and the Little Joe II launch vehicle interface shall be as specified in Specification SID 62-700-2 (as applicable).

4. QUALITY ASSURANCE

4.1 Reliability. - The reliability of the interface between the Apollo command module adapter and the Little Joe II launch vehicle shall be as specified in Specification SID 62-700-2 (as applicable).

5. PREPARATION FOR DELIVERY

Not applicable

6. NOTES

6.1 Intended Use. - This specification is intended to be used as the contract document which describes the Apollo command module adapter and the Little Joe II launch vehicle interface requirements.

6.2 Interface Drawings. - The contractor shall provide interface drawings upon release.

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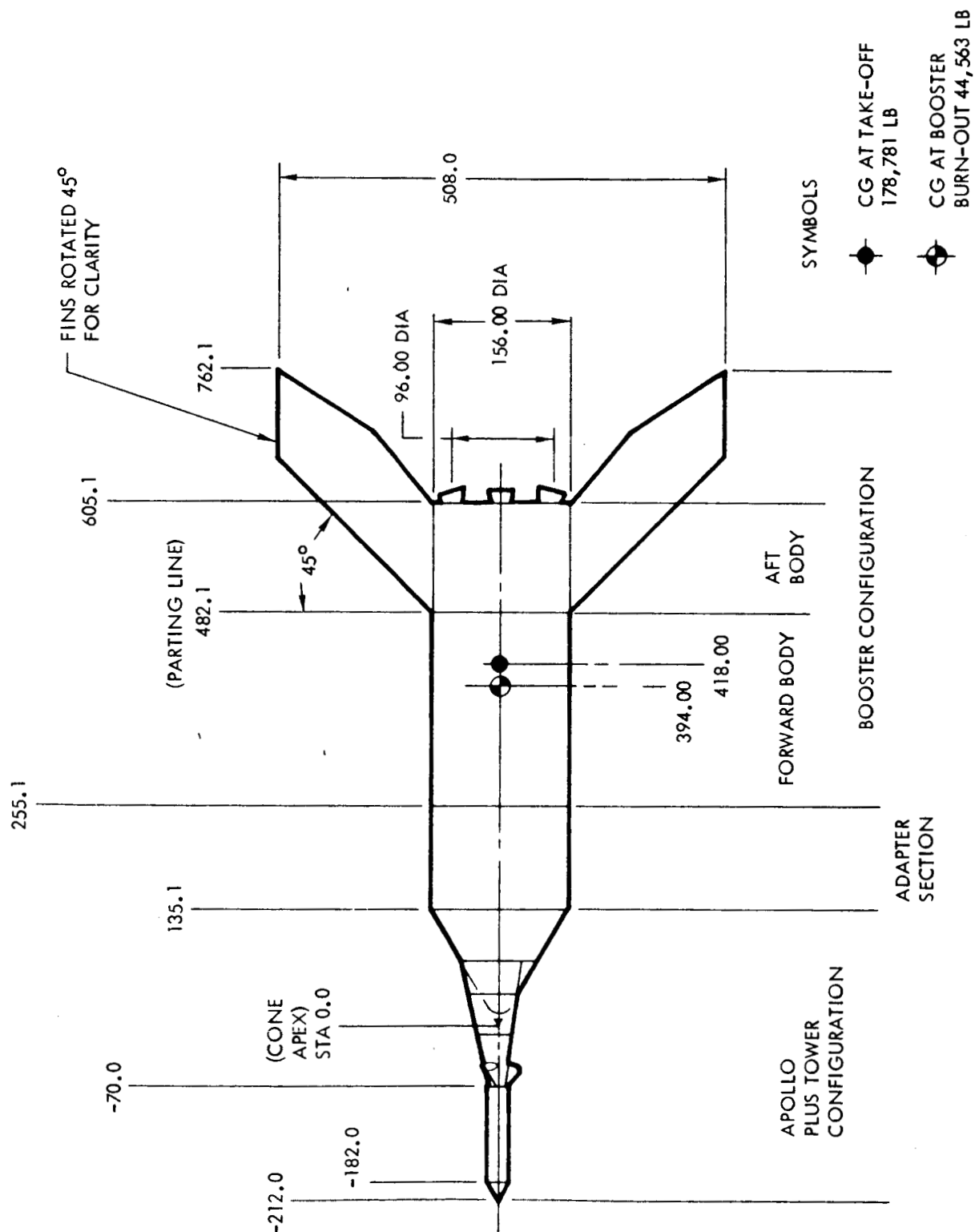


Figure 1. General Arrangement of Little Joe II Booster and Apollo Command Module

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